

Guiding Academic Transformation: The NMC Horizon Report and the ELI Key Issues in Teaching and Learning

EDUCAUSE Live!

April 2017

EDUCAUSE

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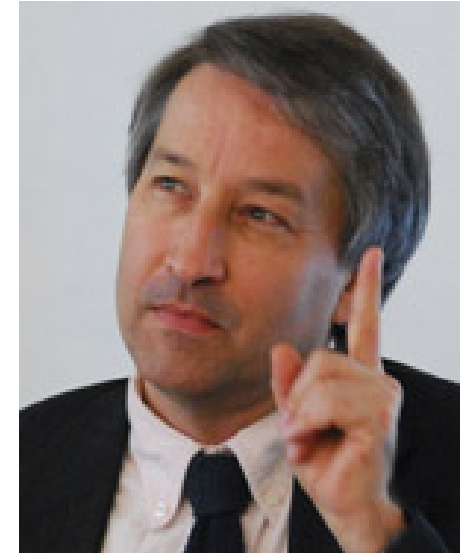
LEARNING
INITIATIVE



Malcolm Brown, Director, EDUCAUSE
Learning Initiative, EDUCAUSE



Baiyun Chen, Instructional Designer,
University of Central Florida



Jon Dorbolo, Associate Director,
Principal Investigator, Philosopher,
Oregon State University



Veronica Diaz, Director of Online
Programs and Associate Director of
ELI, EDUCAUSE



Tina Oestreich, Senior Director,
Teaching and Learning Technologies,
Case Western Reserve University

transformation





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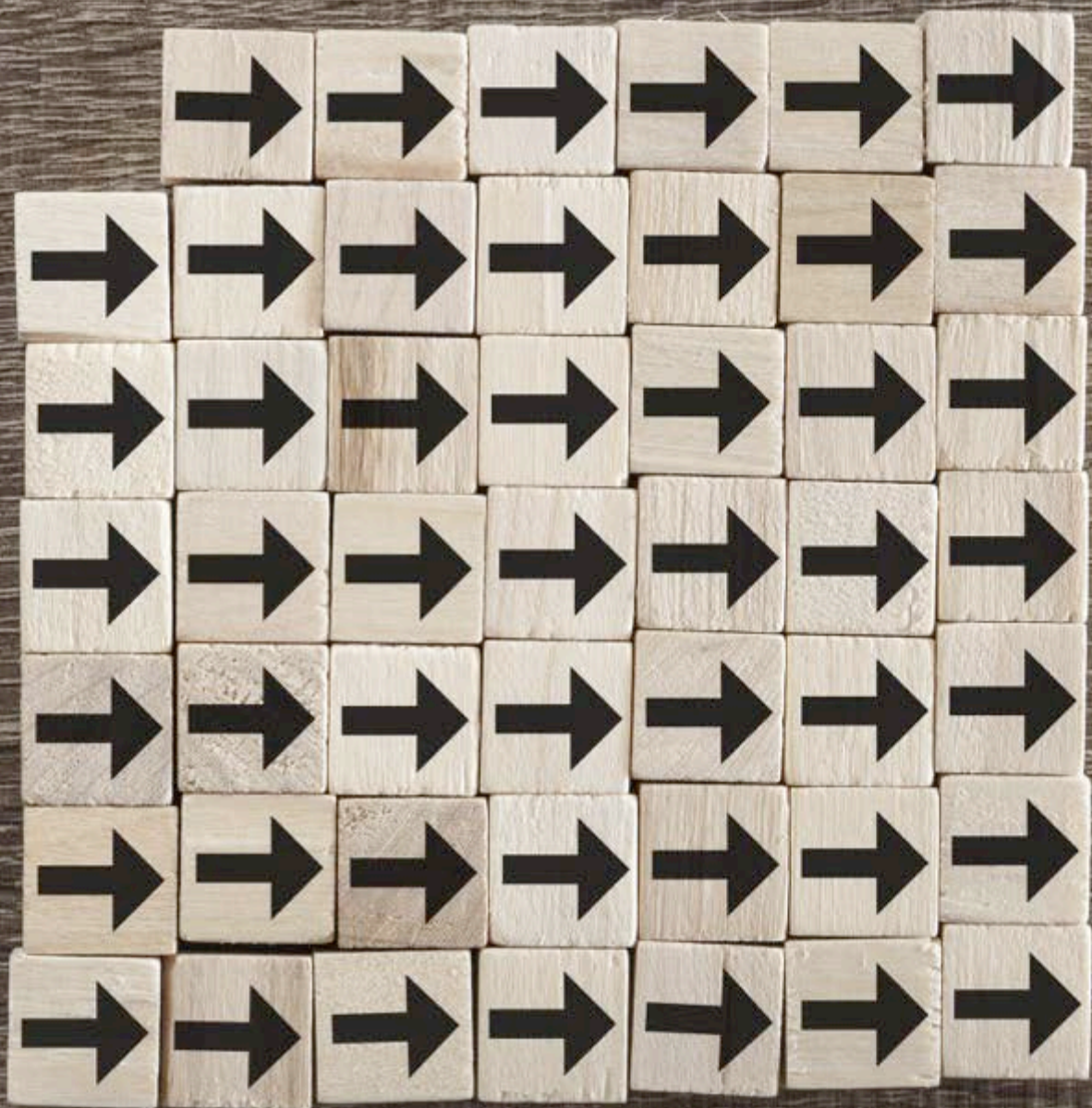
THE CHRONICLE OF HIGHER EDUCATION

How to Make Strategic Big Bets

College leaders searching for **transformative change** must avoid letting ambition — or caution — imperil their institution

By Lee Gardner | FEBRUARY 19, 2017







transformation

a **thorough** or **dramatic** change in form or appearance

physics the induced or spontaneous change of one element into another

biology the genetic alteration of a cell by introduction of extraneous DNA

biology the inheritable modification of a cell from its normal state to a malignant state



transformation
a thorough or dramatic change in form or appearance
and in substance

strategic in scope

institutional in implementation

requiring **cultural change**

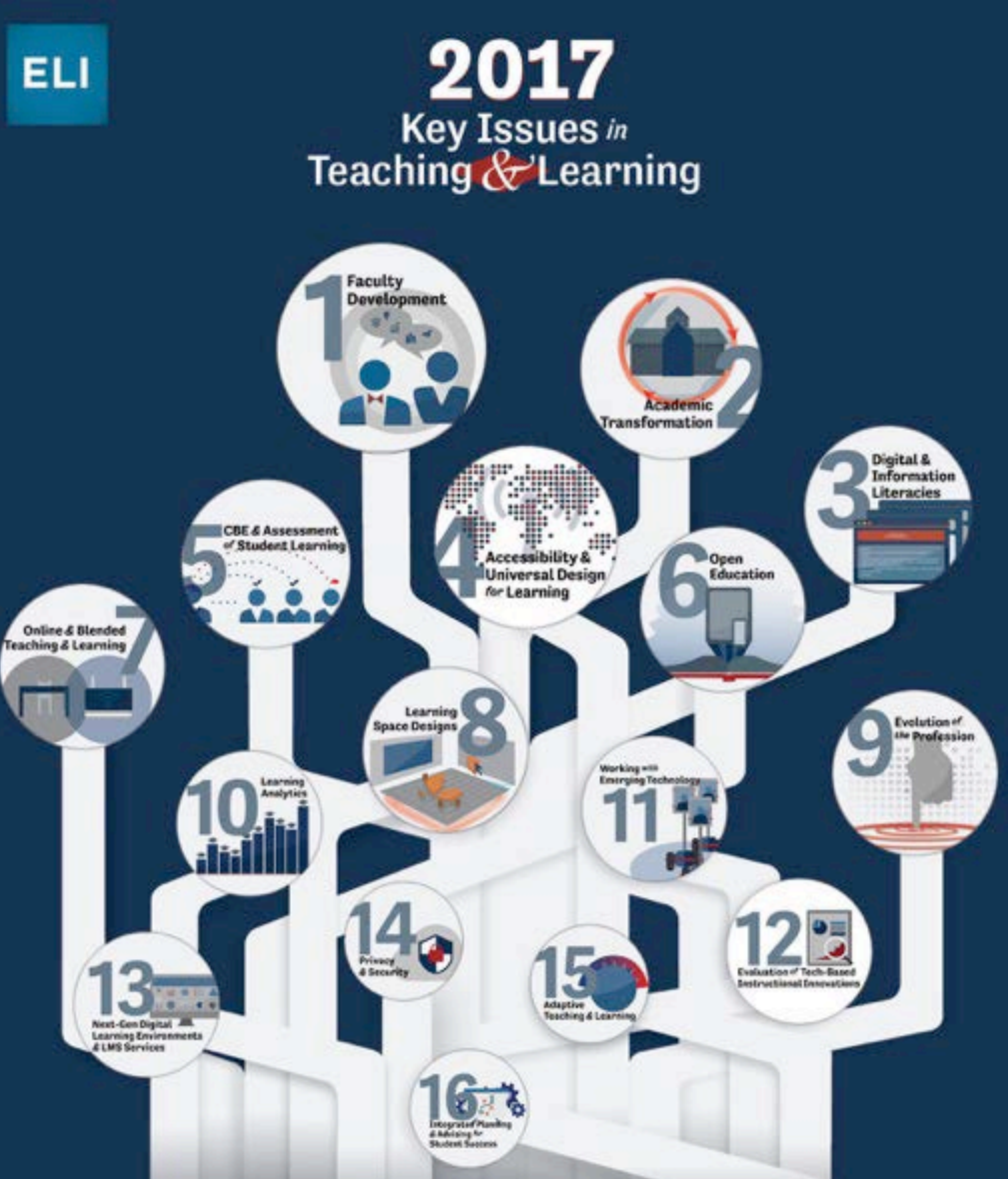
bonus: can appear to be a **wicked problem**







Horizon Report > 2017 Higher Education Edition



Which of the 6 developments in educational technology will have the greatest impact at your institution?

- Adaptive Learning Technologies
- Mobile Learning
- The Internet of Things
- Next-Generation
- Artificial Intelligence
- Natural User Interfaces

POLL

Developments in Ed Tech

fast (<1 yr)

- Adaptive Learning Technologies
- Mobile Learning

mid-range
(2-3 yrs)

- The Internet of Things
- Next-Generation LMS

long range
(4-5 yrs)

- Artificial Intelligence
- Natural User Interfaces

Which of these trends do you think is most important at your institution?

- Advancing Cultures of Innovation
- Deeper Learning Approaches
- Growing Focus on Measuring Learning
- Redesigning Learning Spaces
- Blended Learning Designs
- Collaborative Learning

POLL

Trends Accelerating Tech

short-term

- Blended Learning Designs
- Collaborative Learning

mid-term

- Growing Focus on Measuring Learning
- Redesigning Learning Spaces

long-term

- Advancing Cultures of Innovation
- Deeper Learning Approaches

Advancing Cultures of Innovation

Long-Term Impact Trends: Driving Ed Tech adoption in higher education for five or more years

Many thought leaders have long believed that universities can play a major role in the growth of national economies. Research universities are generally perceived as incubators for new discoveries and innovations that directly impact their local communities and even the global landscape.⁹ In order to breed innovation and adapt to economic needs, higher education institutions must be structured in ways that allow for flexibility while spurring creativity and entrepreneurial thinking. There is a growing consensus among many higher education thought leaders that institutional leadership and curricula could benefit from adopting agile startup models. Educators are working to develop new approaches and programs based on these models that stimulate top-down change and can be implemented across a broad range of institutional settings.¹⁰ In the business realm, the Lean Startup movement uses technology as a catalyst for promoting a culture of innovation in a more widespread, cost-effective manner, and provides a compelling model for higher education leaders to consider.¹¹

Overview

The Lean Startup movement was largely cultivated in Silicon Valley, the hub of technology innovation, with roots in higher education. Many graduates of Stanford University, for example, have become successful entrepreneurs because of the experience they gain developing business strategies through hands-on curriculum.¹² Stanford alumni entrepreneurs are responsible for global revenue of \$2.7 trillion annually.¹³ Similarly in the UK, the Cambridge University Entrepreneurs group has helped generate companies with approximately £100 million of investment over a 15-year period.¹⁴ In many ways, the career trajectory of graduates reflects the offerings of the institutions they attend, making it vital for universities and colleges to exemplify the principles they wish to foster in their students. Like startups, institutions are becoming structured in ways that allow them to constantly evolve, reflecting and pushing the boundaries of the global marketplace.¹⁵ This includes deviating from hierarchical decision-making processes to promote collaborative strategies and incorporate student voices.

The contemporary workforce calls for employees that are agile, adaptable, and inventive¹⁶ and universities and colleges are increasingly revamping their existing programs and creating new ones to nurture these key skills.¹⁷ In the US alone, the number of formal entrepreneurial courses in higher education has grown exponentially over the past two decades with nearly 25% of today's college students aspiring to be entrepreneurs.¹⁸ While this trend has been materializing more gradually, the positive impact is evident. A study prepared for the European Commission revealed that in comparison with their peers, university alumni who engaged in entrepreneurial programs were able to secure jobs more quickly and were more confident in their abilities to innovate in the workplace and start new businesses.¹⁹ The Consortium for Entrepreneurship Education also cites major benefits for improving aspects of student attitude including self-awareness, self-management, and creativity.²⁰

In order to breed these progressive cultures, higher education institutions and their faculty must be equipped with proper strategies. In Poland, Kozminski University (KU), known for their leading graduate management program, found that a large pool of incoming students who had received undergraduate degrees elsewhere were not adequately prepared. As a result, KU launched an initiative to introduce entrepreneurship courses to 40 local non-business universities and train lecturers in other disciplines, such as engineering, agriculture, and art.²¹ Additionally, *Harvard Business Review* recommends that institutions work with industry leaders to integrate more experience-based learning.²² This notion is being increasingly embraced by universities around the world; San Jose State University, for example, recently partnered with Facebook to expose more young women to computer science with the long-term goal of boosting the company's cyber security efforts.²³

Implications for Policy, Leadership, or Practice

The Innovation Policy Platform (IPP) asserts that universities should bolster entrepreneurship courses to attract and accommodate more students, while nurturing faculty that can meet high-quality teaching standards. Educators in these programs must understand the complex pedagogies that support more

Trends

Which of these challenges is the most pressing at your institution?

- Improving Digital Literacy
- Integrating Formal and Informal Learning
- Achievement Gap
- Advancing Digital Equity
- Managing Knowledge Obsolescence
- Rethinking the Roles of Educators

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Challenges Impeding Tech



solvable

- Improving Digital Literacy
- Integrating Formal and Informal Learning

difficult

- Achievement Gap
- Advancing Digital Equity

wicked

- Managing Knowledge Obsolescence
- Rethinking the Roles of Educators

Challenges

Blending Formal and Informal Learning

Solvable Challenge: Those that we understand and know how to solve

As the Internet has brought the ability to learn something about almost anything to the palm of one's hand, there is an increasing interest in the kinds of self-directed, curiosity-based learning that have long been common in museums, science centers, and personal learning networks.¹²² These, along with life experience and other more serendipitous forms of learning, fall under the banner of informal learning, and serve to enhance student engagement by encouraging them to follow their interests. Higher education institutions have not yet been able to incorporate such experiences across their courses and programs at scale, though many experts believe that a blending of formal and informal methods of learning can create an environment that fosters experimentation, curiosity, and above all, creativity.¹²³ In this sense, an overarching goal is to cultivate the pursuit of lifelong learning in all students and faculty. However, methods of formally acknowledging and rewarding skills both instructors and students master outside of the classroom are compounding this challenge.¹²⁴

Overview

In an age of video tutorials, open content, and social media, it is easy for people to find ways to learn and gain new skills anytime, anywhere. Informal learning recognizes that knowledge acquisition can happen in any given moment, no matter how casual the environment.¹²⁵ A student can spend years practicing advanced graphic design techniques, for example, only to be relegated to introductory design courses when enrolled at a university. Most higher education institutions still exclusively speak the language of course credits,¹²⁶ not incorporating prior informal experience as a placement factor. While the blending of formal and informal learning is an intriguing notion, it is hampered by the lack of scalable ways to qualify learning that happens beyond the classroom. Fortunately, UNESCO is setting a precedent, connecting informal learning outcomes to the goal of building societies of lifelong learners in their book *Global Perspectives on Recognizing Non-formal and Informal Learning: Why Recognition Matters*.¹²⁷

Although the burden initially appears to be on formal institutions to deeply consider how informal learning

experiences fit in with course objectives and assessment, students must also better understand what characterizes beneficial informal learning resources. This intersection encompasses a potential solution; universities and colleges are well poised to play a bigger role in helping students discover and maximize credible digital tools and resources as they pursue their curiosities.¹²⁸ Responses to the challenge can be easily mistaken for simply integrating informal opportunities, but the ultimate goal is to combine the two to achieve the best of both worlds. For example, an EDUCAUSE study revealed that even though students and instructors use mobile devices regularly, they still need technical, logistical, and pedagogical support from institutions to understand how to use them for learning purposes.¹²⁹

Solving this challenge requires institutions and employers to view informal learning in a positive light. Ongoing learning is particularly important for working professionals who must continuously gain new skills to advance their careers. Traditionally, this has translated into pursuing graduate degrees. The rise of micro-credentials or "nanodegrees" is disrupting this paradigm as online learning providers like Udacity and Coursera have partnered with businesses including Google and Instagram to help people informally further their education in areas such as mobile app development.¹³⁰ Increasingly, social media is also being leveraged to display these kinds of accomplishments. LinkedIn, for example, enables users to list any skills that could appeal to prospective employers; open badging integration through Credly allows the sharing of verified achievements, such as completing an online course in coding.¹³¹

Implications for Policy, Leadership, or Practice

The European Commission has been instrumental in acknowledging the benefits of informal learning and setting policy precedents. Their report "Recognition of Prior Non-Formal and Informal Learning in Higher Education" describes an assortment of initiatives including Common European Principles for the Identification and Validation of Non-formal and Informal Learning and the European Guidelines for Validation of Non-formal and Informal Learning.¹³² Understanding societal changes and their impact on education is key

Which of the top 7 key issues is most important at your institution?

- Academic Transformation
- Faculty Development
- Assessment of Learning
- Online and Blended Learning
- Learning Analytics
- Learning Space Designs
- Accessibility and Universal Design for Learning

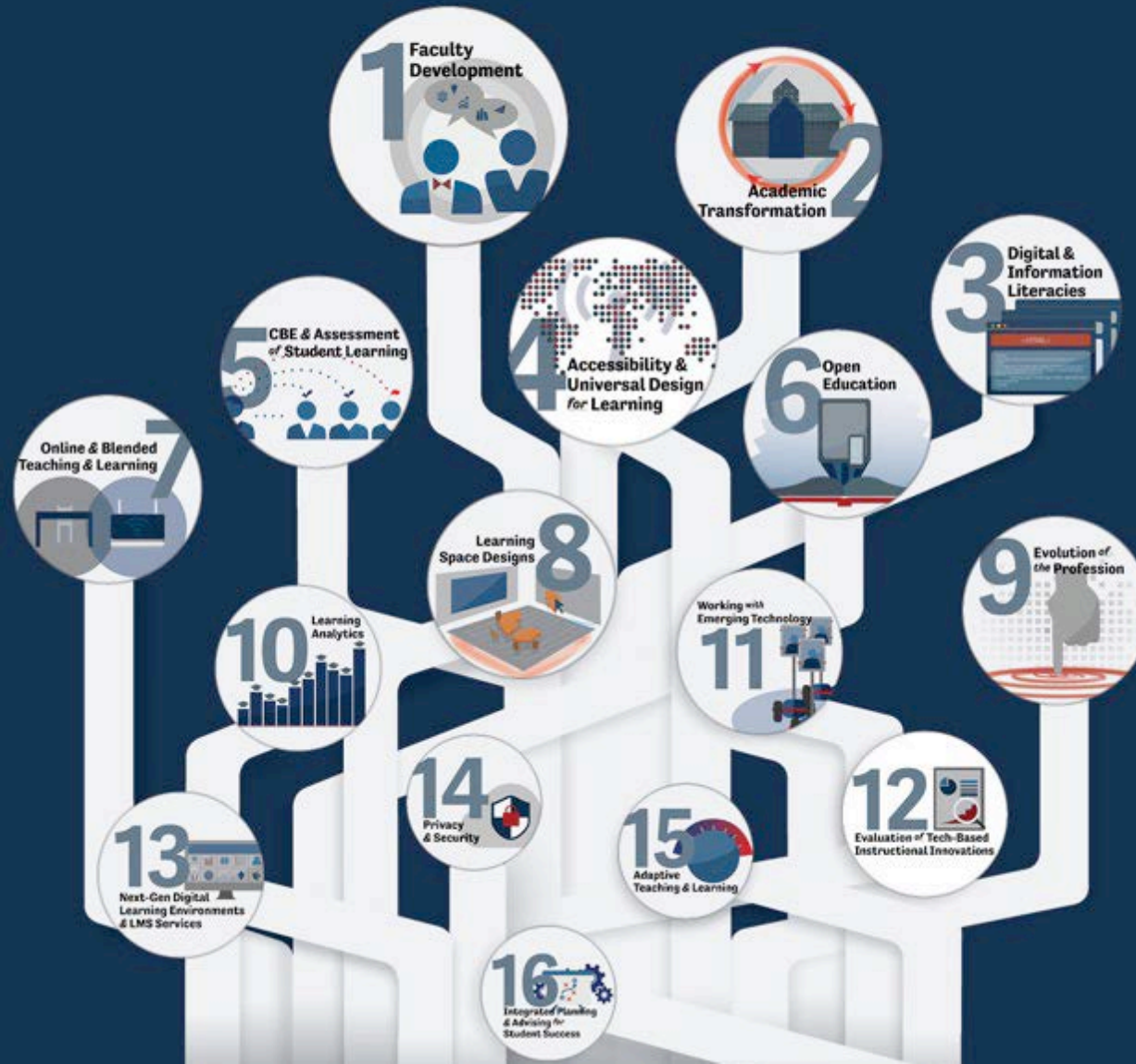
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ELI

2017

Key Issues in Teaching & Learning

tinyurl.com/2017keyissues



1. Faculty development
2. Academic transformation
3. Digital and information literacies
4. Accessibility and universal design
for learning
5. Competency-based education
(CBE) & Assessment for Student
Learning

	Doctorate	Masters	Baccalaureate	Associates	Aggregate
1					Fac Dev
2					Acad Transf
3					Literacies
4					Access/UDL
5					CBE/assess

	Doctorate	Masters	Baccalaureate	Associates	Aggregate
1		Fac Dev	Fac Dev		Fac Dev
2	Fac Dev			Fac Dev	
3					
4					
5					

	Doctorate	Masters	Baccalaureate	Associates	Aggregate
1	Acad Transf	Fac Dev	Fac Dev		Fac Dev
2	Fac Dev	Acad Transf		Fac Dev	Acad Transf
3			Acad Transf		
4				Acad Transf	
5					

	Doctorate	Masters	Baccalaureate	Associates	Aggregate
1	Acad Transf	Fac Dev	Fac Dev	Access/ UDL	Fac Dev
2	Fac Dev	Acad Transf	Literacies	Fac Dev	Acad Transf
3	Literacies	Literacies	Acad Transf		Literacies
4				Acad Transf	
5					

**#6
Literacies**

	Doctorate	Masters	Baccalaureate	Associates	Aggregate
1	Acad Transf	Fac Dev	Fac Dev	Access/UDL	Fac Dev
2	Fac Dev	Acad Transf	Literacies	Fac Dev	Acad Transf
3	Literacies	Literacies	Acad Transf		Literacies
4			Access/UDL	Acad Transf	Access/UDL
5		Access/UDL			

#6

Access/UDL

	Doctorate	Masters	Baccalaureate	Associates	Aggregate
1	Acad Transf	Fac Dev	Fac Dev	Access/ UDL	Fac Dev
2	Fac Dev	Acad Transf	Literacies	Fac Dev	Acad Transf
3	Literacies	Literacies	Acad Transf	CBE	Literacies
4		CBE	Access/UDL	Acad Transf	Access/ UDL
5	CBE	Access/ UDL			CBE/ assess

#12 CBE

	Doctorate	Masters	Baccalaureate	Associates	Aggregate
1	Acad Transf	Fac Dev	Fac Dev	Access/ UDL	Fac Dev
2	Fac Dev	Acad Transf	Literacies	Fac Dev	Acad Transf
3	Literacies	Literacies	Acad Transf	CBE	Literacies
4	OL & Blended	CBE	Access/UDL	Acad Transf	Access/ UDL
5	CBE	Access/UDL	Open Ed	Open Ed	CBE/ assess

	Doctorate	Masters	Baccalaureate	Associates	Aggregate
1	Acad Transf	Fac Dev	Fac Dev	Access/ UDL	Fac Dev
2	Fac Dev	Acad Transf	Literacies	Fac Dev	Acad Transf
3	Literacies	Literacies	Acad Transf	CBE	Literacies
4	OL & Blended	CBE	Access/ UDL	Acad Transf	Access/ UDL
5	CBE	Access/UDL	Open Ed	Open Ed	CBE/assess

	Doctorate	Masters	Baccalaureate	Associates	Aggregate
1	Acad Transf	Fac Dev	Fac Dev	Access/ UDL	Fac Dev
2	Fac Dev	Acad Transf	Literacies	Fac Dev	Acad Transf
3	Literacies	Literacies	Acad Transf	CBE	Literacies
4	OL & Blended	CBE	Access/UDL	Acad Transf	Access/ UDL
5	CBE	Access/UDL	Open Ed	Open Ed	CBE/ assess

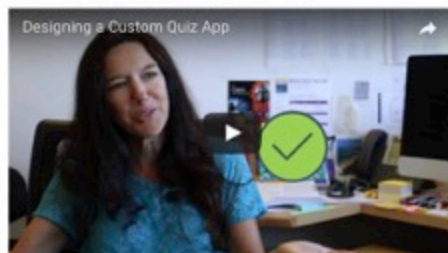
University of Central Florida



Contact: **Kelvin Thompson**

Instructional designers, faculty, and students at the University of Central Florida discuss how using adaptive learning technology has enhanced teaching and learning in their online courses. For more information about personalized adaptive learning at UCF: dl.ucf.edu/adaptive.

California State University, Northridge



Contact: **Hillary Kaplowitz**

A key component to student success is practice. To help students master the material, biology professor Dr. Cindy Malone teamed up with coders and developers at CSUN to create the Elite Gene Team app. This app lets students study course material on their smartphone or tablet anywhere, anytime.

Pace University



Contact: **Rachel Wildner**

At Pace University we use ePortfolio to supplement learning.

Case Western Reserve University



Contact: **Tina Oestreich**

Case Western Reserve University (CWRU) is committed to providing students with active, powerful learning experiences. Working together with instructional designers, programmers, artists, and others, faculty and students are developing interactive learning experiences using the Microsoft HoloLens at CWRU's Interactive Commons.

Emory University



Contact: **Dana Smith Bryant, Ph.D**

Emory University's Next Generation LMS Transition Project: In support of our campus strategic goal, Enhancing the Student Experience, Emory explored next generation LMS features in 2015, which ultimately resulted in changing platforms after 12+ years. The university is currently in the midst of implementing a comprehensive LMS transition plan for all course sites by Fall 2017.

Western Washington University

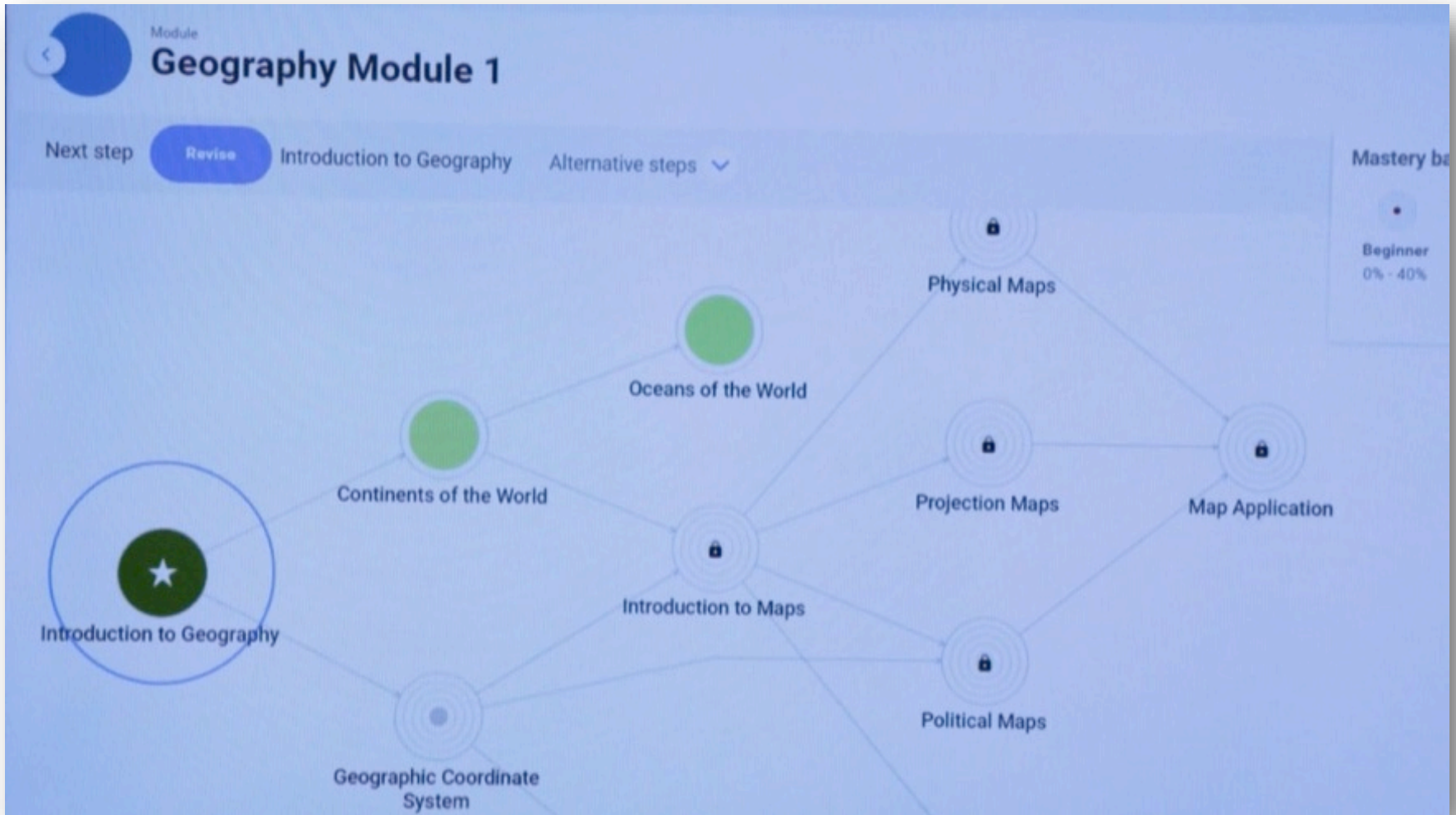


Contact: **John Farquhar**

<http://tinyurl.com/ELI17vids>

4 Key Questions

1. What problem were they trying to address
2. Why did you choose this technology
3. What change management or cultural leadership was needed
4. Impact of project



University of Central Florida,
Personalized Adaptive Learning

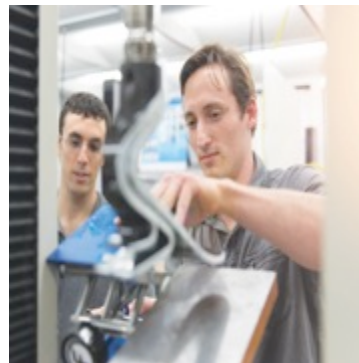
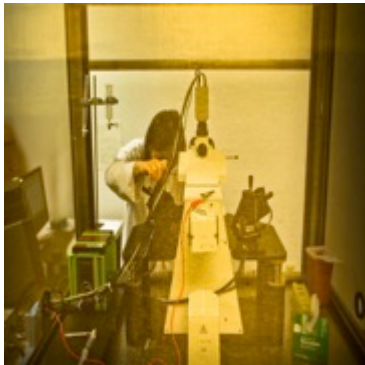
Personalized Adaptive Learning Initiative

University of Central Florida
Baiyun Chen, Instructional Designer
Center for Distributed Learning,
University of Central Florida



What problem to address?

- Improve student performance, success, retention
- Scale across disciplines among large-enrollment classes
- Explore teaching innovation
- Monitor progress of student learning



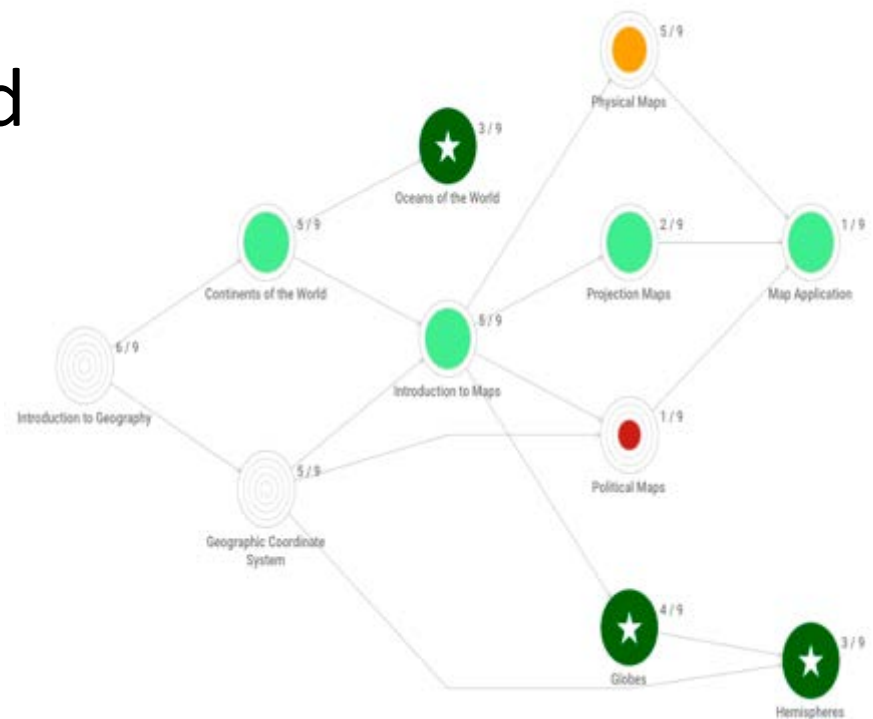
Why did you choose this technology or approach?

- Content agnostic: add instructor content
- Student pretest determines learning path
- System automatically adjusts remediation, acceleration and other content in chunks based on continuous assessments
- Extensive reporting on each student's individual status



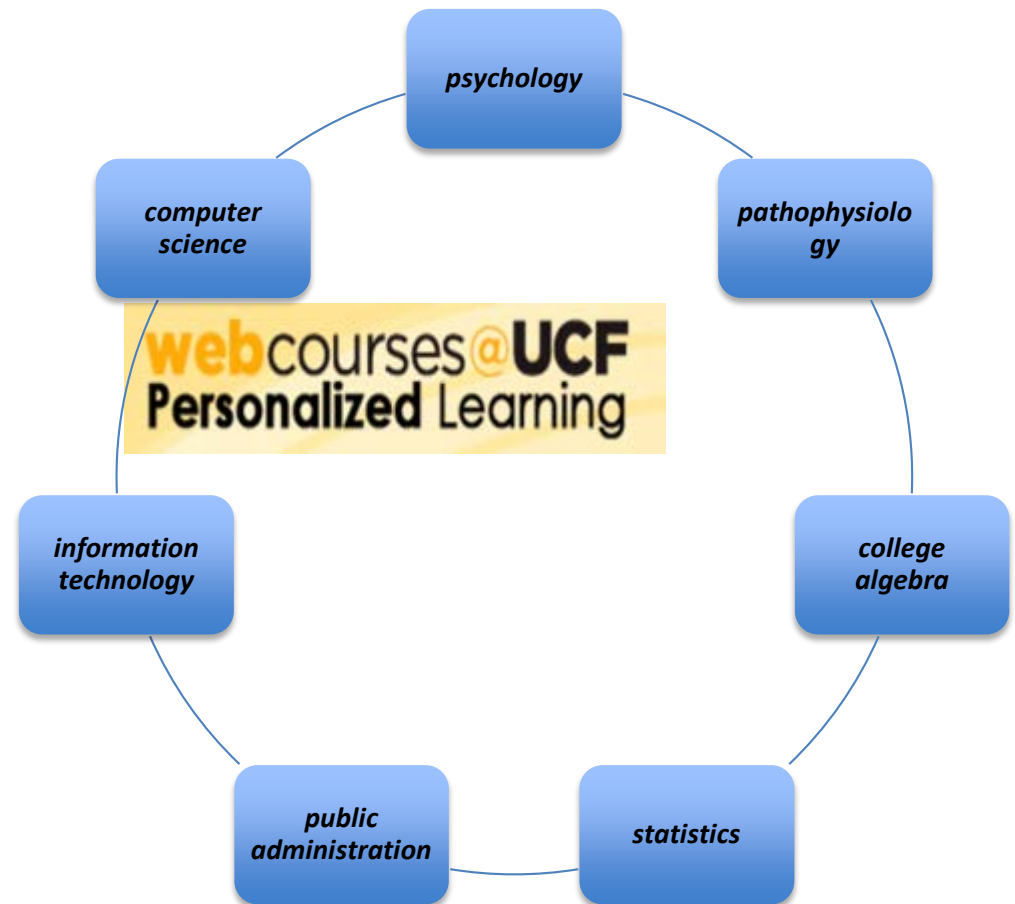
What change management or cultural leadership was needed?

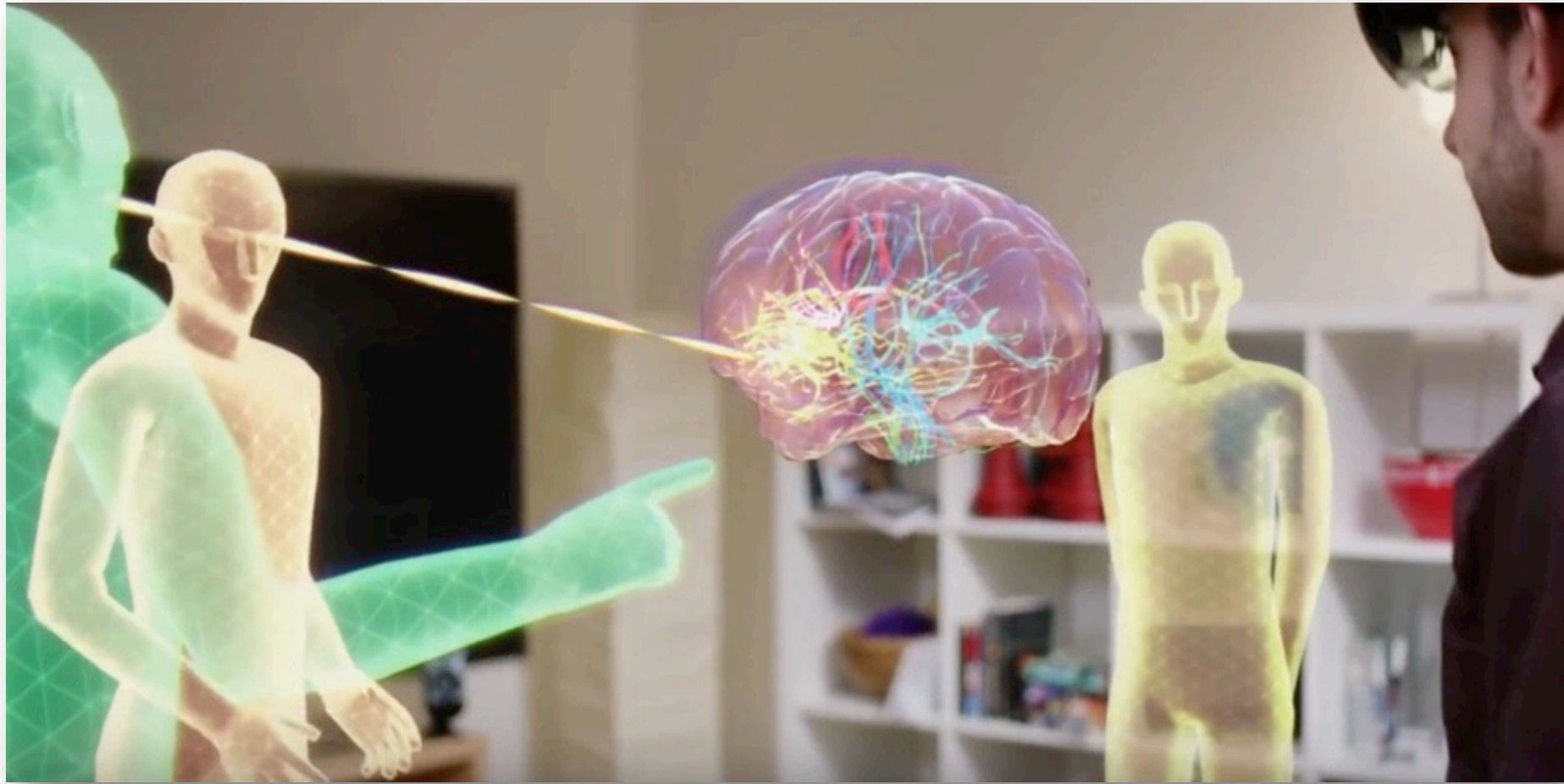
- Strong leadership support
- Personalized self-paced student learning
- Guide on the side
- Course development support



What is the impact of the project?

- Project impact
 - 17 courses + 5 courses
 - 44 course sections
 - 2069 students
- Contact:
 - pal@ucf.edu





Case Western Reserve University, Rising
To Next Level of Interactive Learning

Tina Oestreich
Sr. Director, Teaching and Learning
Technologies

Case Western Reserve University
Cleveland, OH

From Active Learning to Active Learning+



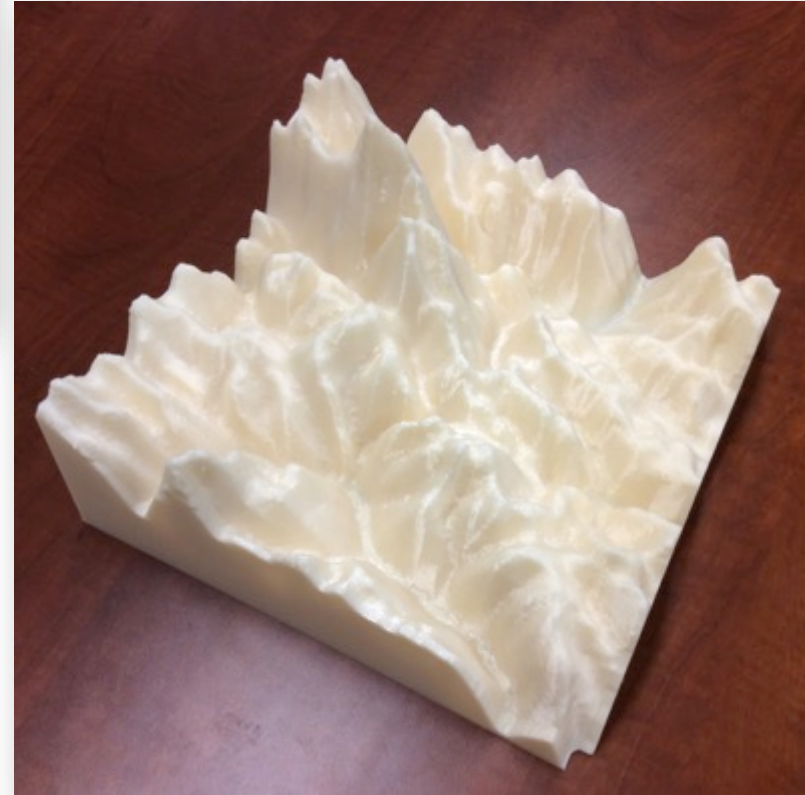
Why did you choose this technology or approach?

- ActiveLearning+ fellows chose different technologies and approaches to solve challenges encountered in their classes
 - Adaptive learning
 - Specialized videos to bridge courses
 - Physical models of mathematical concepts
 - Augmented and virtual reality

What change management or cultural leadership was needed?

- ActiveLearning+ grants help to provide seed funding for faculty to explore new ways of creating educational resources and explore new teaching approaches.
- Faculty become champions of successful approaches and help to lead change.

Describe the impact of the project.





Oregon State University, Reimagining Learning Spaces: The Learning Innovation Center

An aerial photograph of the Oregon State University campus. The central focus is a large, classical-style building with a prominent dome and a portico with columns. A wide, star-shaped walkway radiates from the base of this building across a large green lawn. The surrounding campus includes various other buildings, trees, and a baseball field in the upper right. The text "Reimagining Learning Spaces" is overlaid in large, bold, orange letters at the top of the image.

Reimagining Learning Spaces

Oregon State University



Problem

UNIVERSITY GOAL



INCREASE RETENTION + GRADUATION RATES



ENHANCE LEARNING AND ENGAGEMENT AT OSU

+

ACCOMMODATE GROWTH OF THE STUDENT
POPULATION



Leadership

PROJECT MISSION

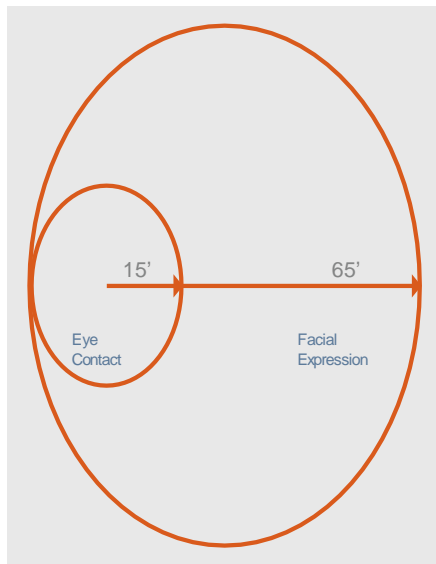
CREATE AN **INSPIRING** TEACHING LABORATORY FOR THE CAMPUS

PROMOTE **ACTIVE** LEARNING AND ENGAGEMENT ACROSS ALL ABILITIES AND AT ALL SCALES OF CLASS SIZES

ENHANCE **INTERACTIONS** AMONGST AND BETWEEN ALL USER GROUPS TO CULTIVATE VIBRANT COMMUNITY






ACTIVE LEARNING – SPATIAL CHARACTERISTICS



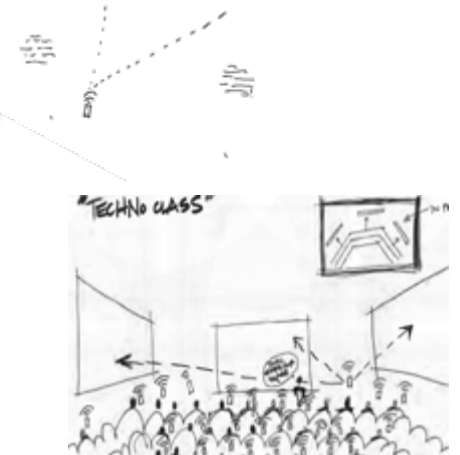
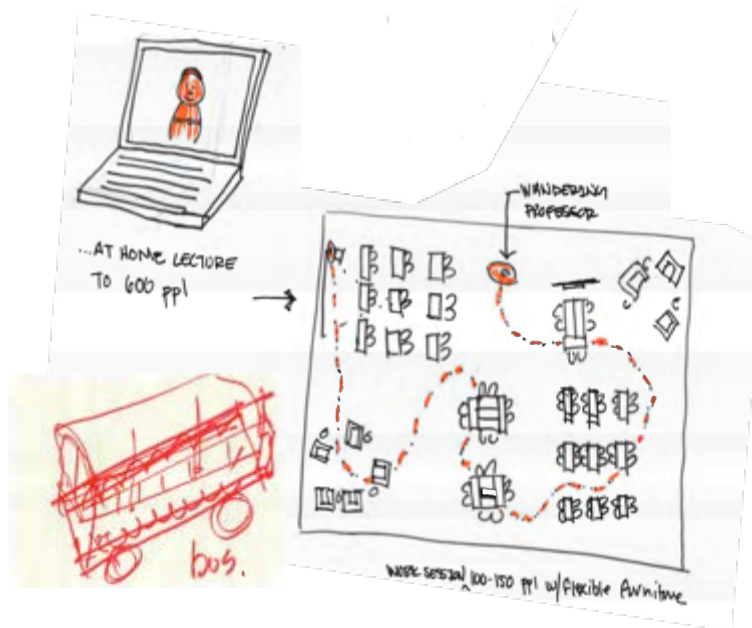
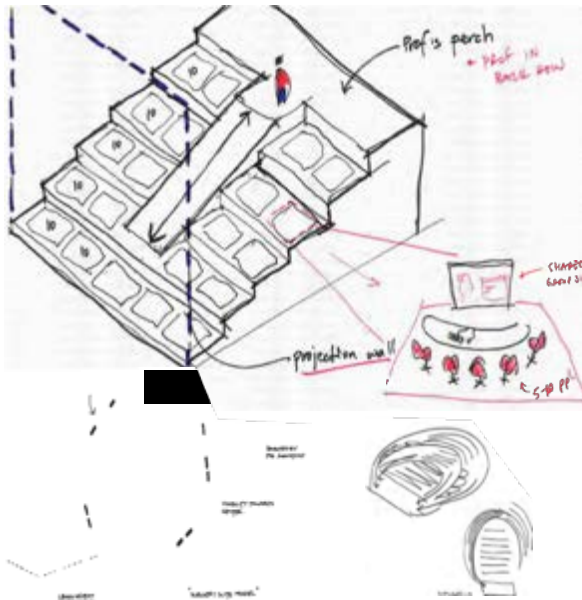
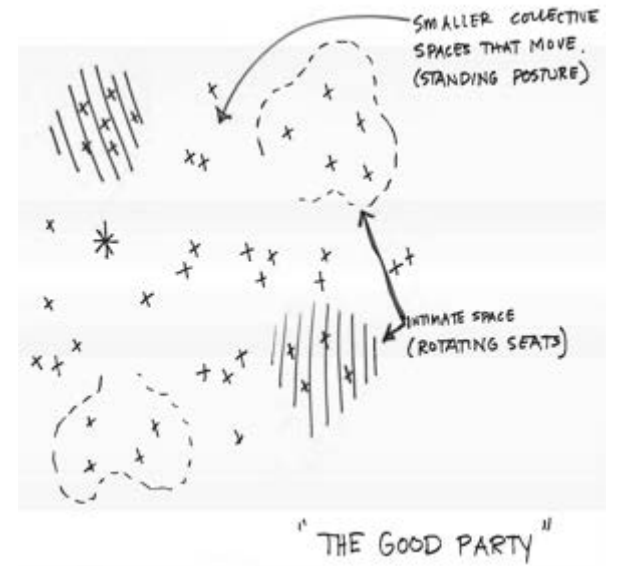
VISIBILITY		PROXIMITY		MOBILITY		FLEXIBILITY	
T FACULTY		EYE CONTACT		O FACULTY		FURNITURE	
O				F			
T MEDIA		FACIAL EXPRESSION		O STUDENTS		SPACE	
O				F			
T PEERS		SHARED WORK SURFACE		O MEDIA		OVER TIME	
O				F			

IN ORDER TO FOSTER COMMUNITY, THE NEW BUILDINGS SHOULD CONNECT

	STUDENT S	FACULTY S	STAFF
	STUDENT TO STUDENT	STUDENT TO FACULTY	STUDENT TO STAFF
	FACULTY TO STUDENT	FACULTY TO FACULTY	FACULTY TO STAFF
	STAFF TO STUDENT	STAFF TO FACULTY	STAFF TO STAFF



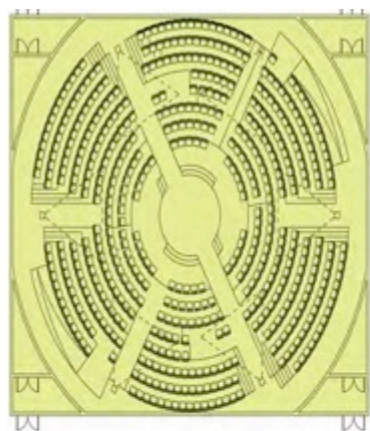
WHAT DOES ACTIVE LEARNING LOOK LIKE?



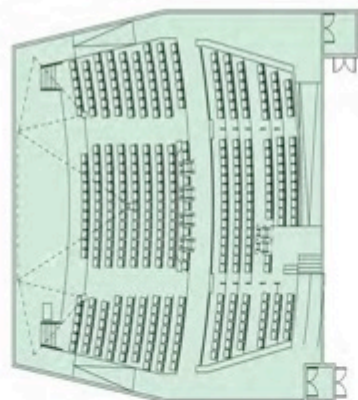


Solution & Rationale

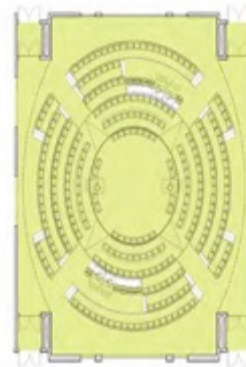
BUILDING PROGRAM – FORMAL LEARNING PROGRAM



60
0



40
0



30
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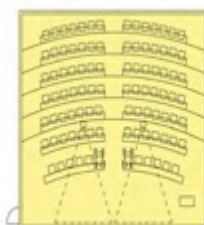
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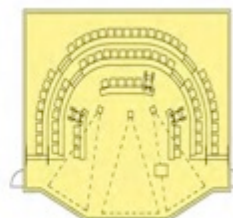
20
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72-
90



10
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7
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60-
89

2145-2270



14
honors



26-40
honors

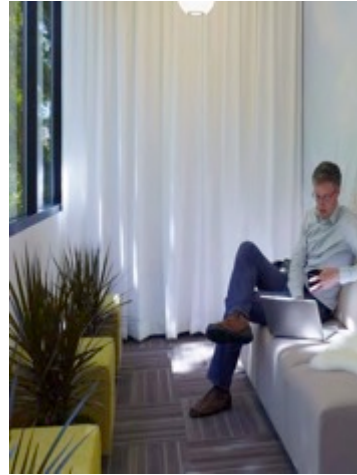


29-42
IIRC

Classroom Seats Integrated Instructional
Resource Center Offices/Facilities University
Honors College Offices and Study Lounges

INFORMAL LEARNING – TYPES OF SPACES

ALONE



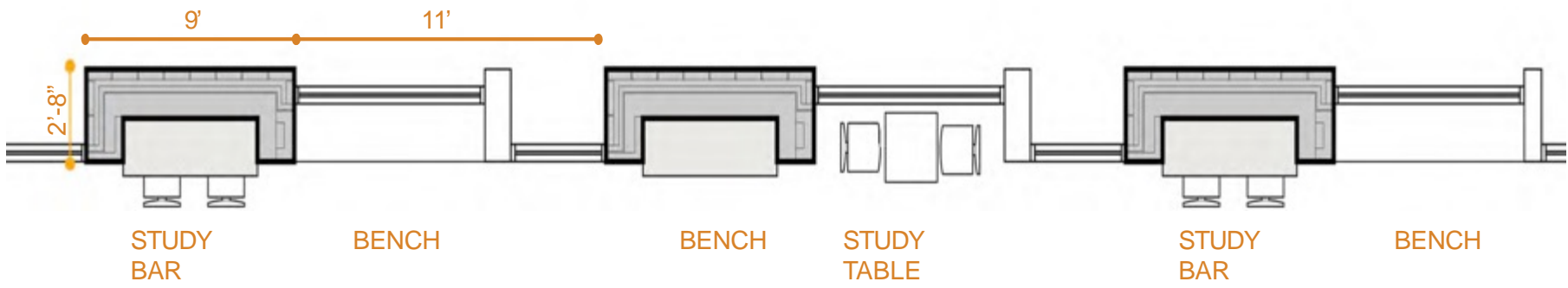
PRIVATE

PUBLIC



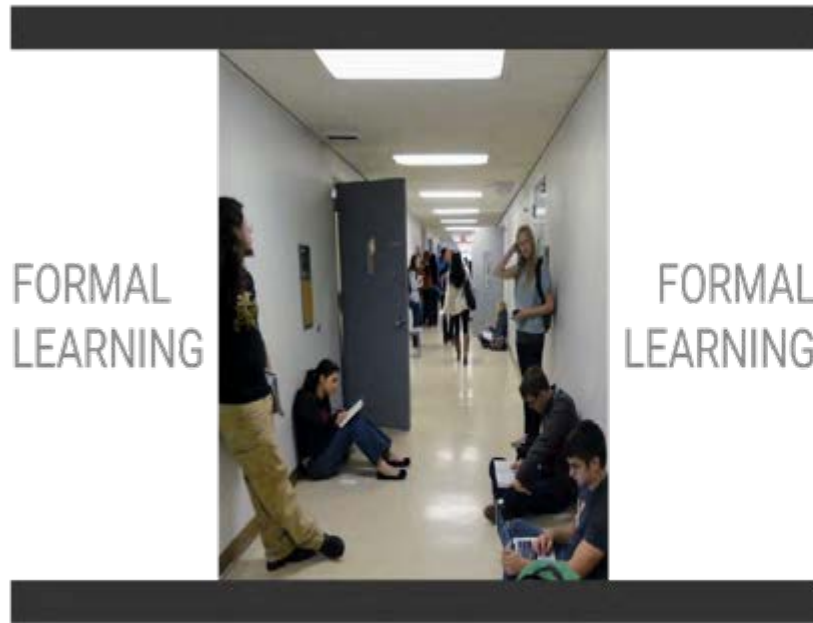
TOGETHER

EXTERIOR CONCEPT – OCCUPIABLE FACADE



DESIGN CONCEPT

TYPICAL CLASSROOM LAYOUT



TYPICAL CORRIDOR

OSU CLASSROOM BUILDING CONCEPT

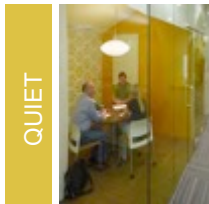


INFORMAL LEARNING

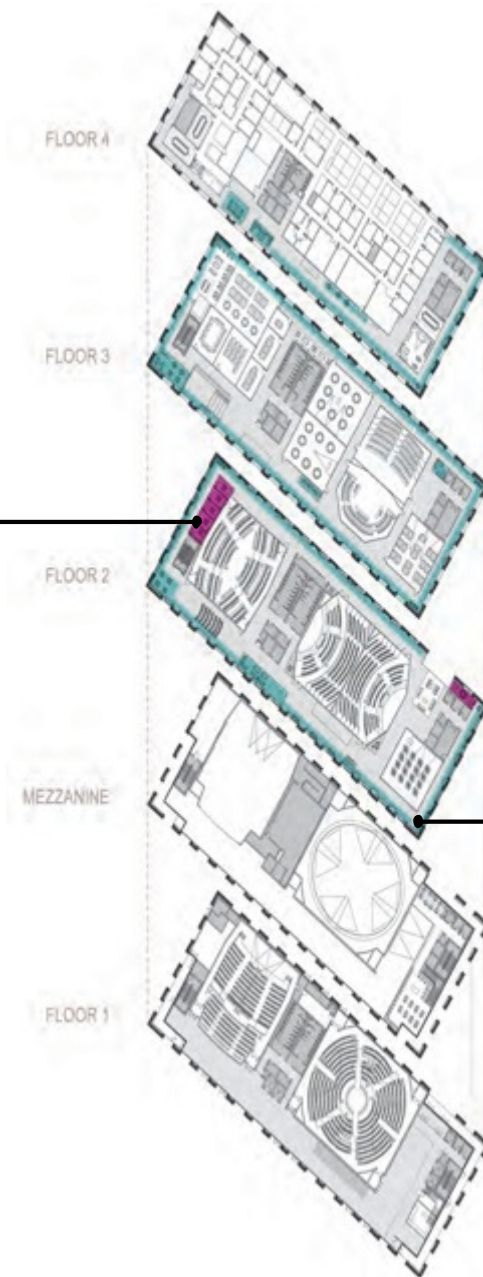
INFORMAL LEARNING

INFORMAL LEARNING – INFORMAL LOOP

BREAK OUT ROOMS



QUIET



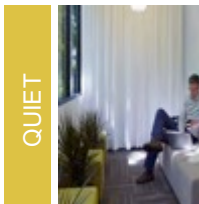
FLOOR 4

FLOOR 3

FLOOR 2

MEZZANINE

FLOOR 1



QUIET

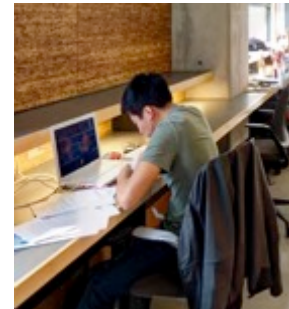
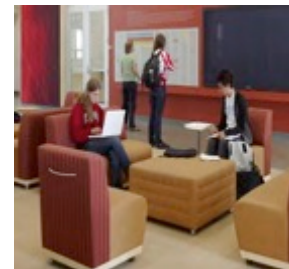


BUZZING



BUZZING

INFORMAL LOOP

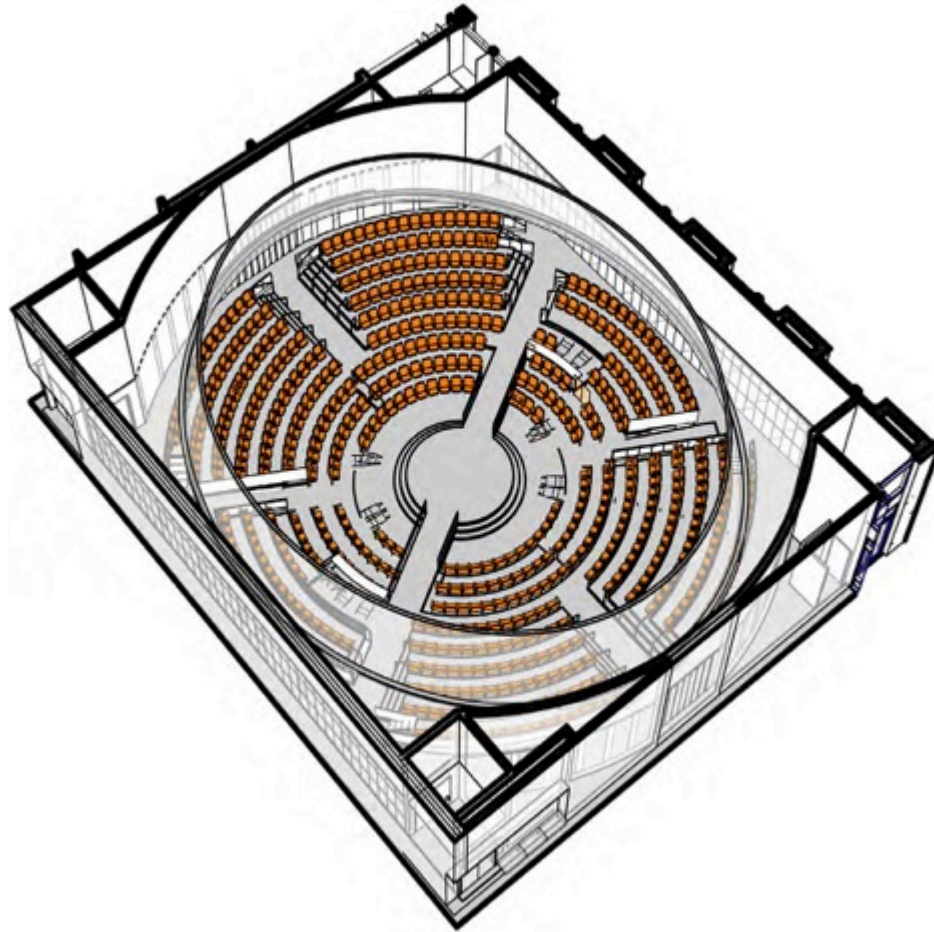








ARENA CLASSROOM





Channel 31
Session ID: ch31

Module 3.6

Golgi Apparatus, transport vesicles & lysosomes

- Golgi: repackaging
- Transport vesicles:
 - Secretory vesicles
 - Membrane renewal vesicles
- Lysosomes: digestive enzymes



Module 3.6

Channel 31
Session ID: ch31

Module 3.6

Golgi Apparatus, transport vesicles & lysosomes

- Golgi: repackaging
- Transport vesicles:
 - Secretory vesicles
 - Membrane renewal vesicles
- Lysosomes: digestive enzymes



Module 3.6

Channel 31
Session ID: ch31

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Golgi Apparatus, transport vesicles & lysosomes

- Golgi: repackaging
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Module 3.6

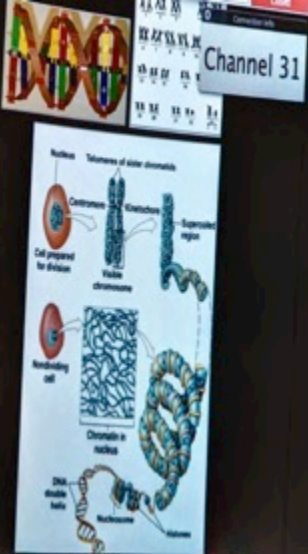


Chromatin:
 loosely coiled DNA
 (cells not dividing)

Chromosomes:
 tightly coiled DNA
 (cells dividing)

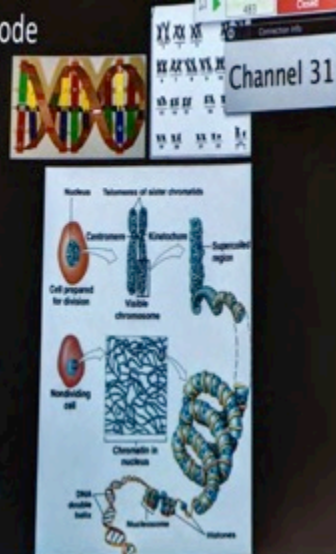
Genes:
 instructions for every
 protein in the body

Alleles:
 DNA instructions for 1
 protein



DNA – the genetic code

- **Chromatin:**
 - loosely coiled DNA (cells not dividing)
- **Chromosomes:**
 - tightly coiled DNA (cells dividing)
- **DNA:**
 - instructions for every protein in the body
- **Gene:**
 - DNA instructions for 1 protein





CASSANDRA HUBER
PRESIDENT
ASSOCIATED STUDENTS OF
OREGON STATE UNIVERSITY



LEARNING INNOVATION CENTER (LINC)



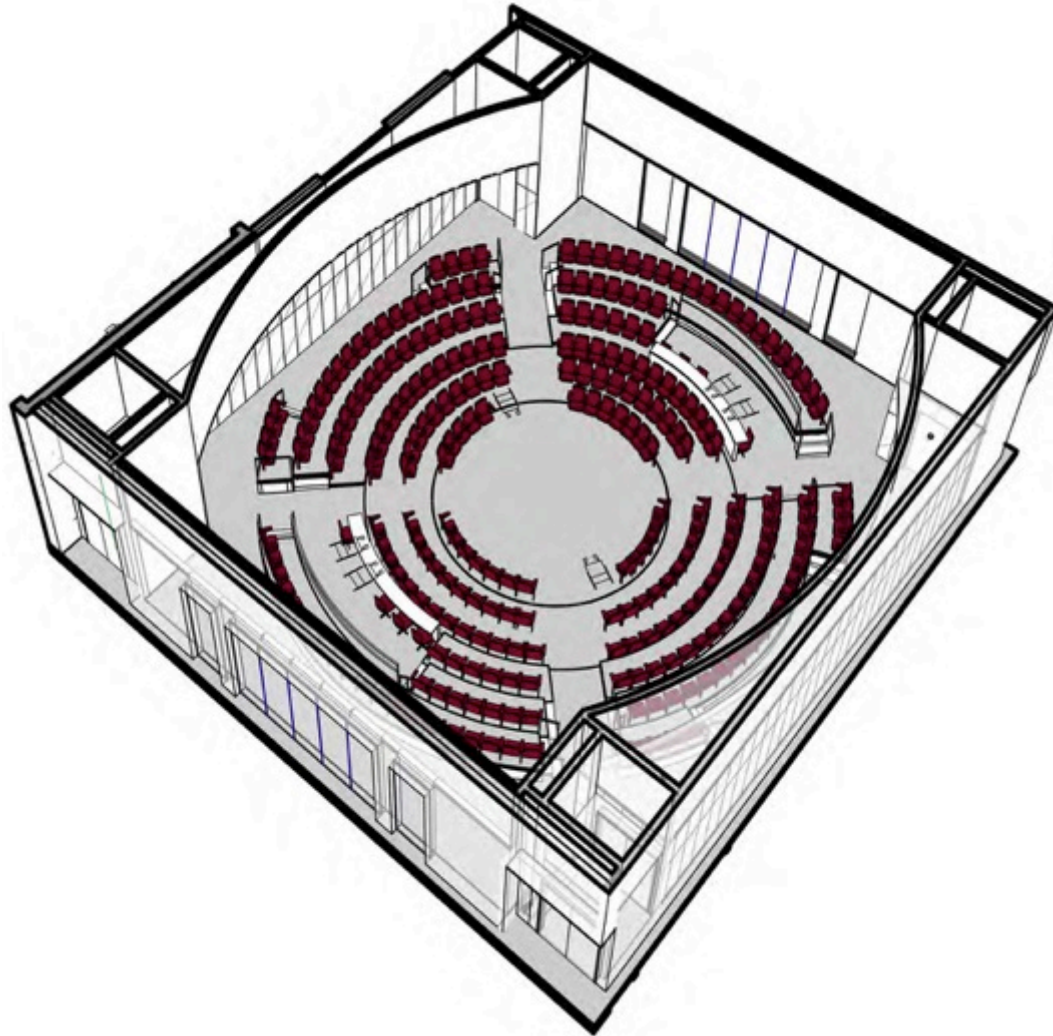
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SMALL ARENA CLASSROOM



What are the Variables of Interest?

- Differs between tasks

	Competing in a race	Completing a puzzle	Using a computer mouse
Making a putt in golf	X		X
Competing in a race	X	X	X
Completing a puzzle	X	X	X
Using a computer mouse			

What are the Variables of Interest?

- Differs between tasks

	Competing in a race	Completing a puzzle	Using a computer mouse
Making a putt in golf	X		X
Competing in a race	X	X	X
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Using a computer mouse			

What are the Variables of Interest?

- Differs between tasks

	Competing in a race	Completing a puzzle	Using a computer mouse
Making a putt in golf	X		X
Competing in a race	X	X	X
Completing a puzzle	X	X	X
Using a computer mouse			

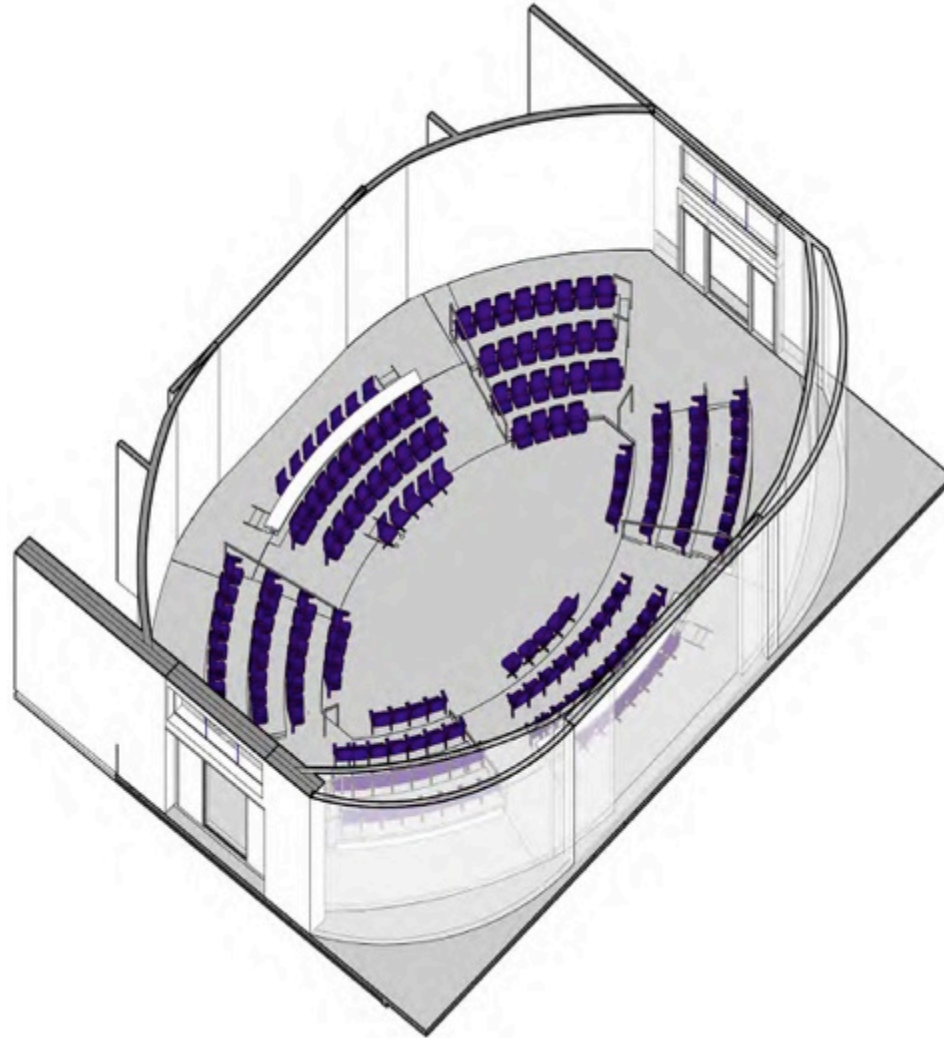
What are the Variables of Interest?

- Differs between tasks

	Competing in a race	Completing a puzzle	Using a computer mouse
Making a putt in golf	X		X
Competing in a race	X	X	X
Completing a puzzle	X	X	X
Using a computer mouse			



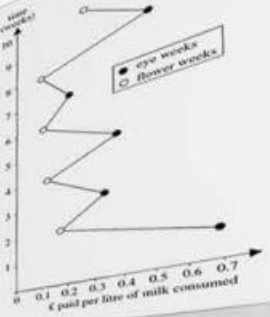
PARLIAMENT CLASSROOM





The seven principles of good feedback

1. Facilitate the development of self-assessment (reflection) among learners.
2. Encourage learners to set their own learning goals around learning activities.
3. Help learners to set performance goals, criteria, and specific standards.
4. Provide opportunities to give the gap between current and desired performance.
5. Deliver specific, constructive information to students about their learning.
6. Encourage learners to seek out and use feedback to help them learn.
7. Provide information to learners that can be used to help them learn.



PARLIAMENT CLASSROOM



ARENA CLASSROOM PODIUM



THE GEOMETRY OF LEARNING

DO THE **PHYSICAL CHARACTERISTICS** OF CLASSROOMS CORRELATE TO
LEARNING OUTCOMES AND **TEACHING PRACTICES**?



Impact





The Geometry of Learning: Executive Summary

What is it? The Geometry of Learning is a research framework designed to construct a large set of broad and deep knowledge about classroom learning spaces at Oregon State University (OSU).

What is the purpose? We are investigating whether and how physical characteristics of classrooms correlate to learning outcomes and teaching practices.

Why does it matter? Prior research shows that characteristics and conditions in classrooms do correlate to learning outcomes. If we identify these factors in OSU classrooms, we may plan to optimize the conditions for student success. Evidence-based findings about classroom values and learning will inform OSU's ongoing investment in classroom redesign.

What is being measured? Factors potentially related to student success.

- Student daily seat locations.
- Student learning outcomes (e.g. clicker responses, course grade percentile, GPA).
- Student attitudes and self-reported conditions (e.g. qualitative survey).
- Classroom values (e.g. light, sound, angle of vision, proximity to instructor, mobility).
- Validation of clicker method of seat location.
- Faculty experiences and strategies for teaching-in-the-round.

How is it being accomplished? About 4,000 students in 29 participating class sections taught by 12 instructors from across the curriculum have consented to enter their seat locations at the start of each class session using clickers. A program of structured interviews with instructors, *Tales from the Learning Circle*, will constellate methods and experiences about innovative classrooms such as the LINC round rooms.

The Geometry of Learning: *Tales from the learning circle*: Executive Summary

What is it? Tales from the learning circle is a research project designed to collect qualitative data from instructors who have taught in the LINC classrooms-in-the-round (LINC 100, 200, 228). This study is part of our comprehensive research agenda, *The Geometry of Learning*.

What is the purpose? The primary objective of this project is to discover themes related to teaching-in-the-round in order to provide material for teacher preparation and to report as findings about these unique classrooms as learning spaces.

What is the focus of study? Our primary research question is: What is the impact of learning space conditions on instructor 's concept, practice, and assessment in teaching?

Why does it matter? Teacher preparation is a major factor in student experience and teaching-in-the-round is an unprecedented challenge in higher education. Organizing descriptions and advice from experienced instructors will be a valuable preparatory aid. Analysis of this data provides OSU a basis for assessing what does and does not work in those learning environments.

What is being measured? We will measure descriptive and prescriptive responses from instructors based on their experiences of teaching-in-the-round.

How is it being accomplished? Qualitative methods (IRB approved) including structured interviews, focus groups, and surveys will be conducted among instructors who have taught-in-the-round. Qualitative coding and analytics will be employed to develop results.



Learning Innovation Center
Oregon State University